

Application No. 09/655,498

Amendment dated December 12, 2003

Reply to Office Action of September 22, 2003

## REMARKS/ARGUMENTS

Claims 1-80 are pending in the above-identified patent application. The Examiner is thanked for the allowance of Claims 4, 5, 9-19 and 22-80.

Claims 1-3, 6-8 and 20-21 are again rejected under 35 U.S.C. 103(a) as being unpatentable over *Seligsohn* (WO 95/04407) in view of *Ames* (USP 5,233,626).

The Examiner has correctly stated that the *Seligsohn* reference "fails to disclose communicating separate communication signals between the user terminal and at least two of the stratospheric platforms concurrently as recited in the claim". The *Ames* reference however does not cure the aforementioned deficiency in teaching of the *Seligsohn* reference and the combination of the two references neither teaches nor suggests these rejected claims. According to the Abstract of the *Ames* reference, for example, the repeater diversity spread spectrum communication system of *Ames* provides substantially fade free communications between a transmitter and a receiver by relaying a transmitted signal through a plurality of linear communications repeaters that produce copies of the transmitted signal, the copies each arriving through an independently fading signal path. The receiver processes the received signal copies to equalize them to one another in delay, frequency, and phase, and then combines the multiple received and equalized signal copies to produce a composite signal having a greatly reduced fading depth. This is totally different from the recitation of the rejected claims.

In *Ames*, copies of the same transmitted signal are received by the receiver after having been relayed by a plurality of linear communications repeaters. After processing as described by *Ames*, the receiver obtains a composite received signal. This is clearly different from the present invention. The combination of *Seligsohn* and *Ames* therefore neither teaches nor suggests Claims 1-3, 6-8, 20 and 21.

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To further clarify the present system and method, independent claims 1, 6 and 20 were previously amended to recite "separate communications signals" to clarify that these signals need not be copies of a single signal. Claims 1, 6 and 20 have been herein further amended to clarify that the user terminal antenna does not have to track each of the multiple stratospheric transponder platforms. For support, see for example, page 5, lines 12-17. Neither *Seligsohn* nor *Ames* teach or suggest this aspect.

As discussed in the specification, using separate antennas to track each stratospheric transponder platform is not practical for low cost terminals. Although a phased array antenna at the user terminal may be used to steer the beam from one stratospheric platform to another to avoid signal interference, such antennas are too expensive for the consumer market. With the claimed arrangement, when cost is a consideration, a low cost antenna that does not require either a tracking mechanism or beam forming circuitry can be used. (See page 1, lines 21-31). Consequently, a user terminal can communicate with multiple stratospheric platforms concurrently using inexpensive antennas that do not have to track the platforms. This advantageously addresses a need and is a secondary consideration of non-obviousness.

*Seligsohn* describes an arrangement wherein the "propagation of radio signals to and from the relay stations would be nearly vertical" (page 6, lines 3-4). This appears to teach away from having multiple high altitude relay stations positioned so as to be able to communicate directly with a user terminal since, if the teachings of *Seligsohn* are followed, all of the multiple relay stations would have to be positioned such that the propagation of all of the signals are "nearly vertical". Furthermore, *Seligsohn* clearly teaches away from the present claims since *Seligsohn* describes and illustrates an arrangement wherein a signal is transmitted from one ground station to a second ground station or to at least another of the relay stations and then to the second ground station. (See for example Figs. 1, 6A-6C and 7A-7B, and

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page 7, lines 10-16, page 9, lines 15-21 and page 16, lines 13-26.) This indicates that the communications are sent directly to a user terminal by one relay station or if the user terminal is further, the first relay station relays the communication to another relay station for it to send the communication to the user terminal. So, in the instances where multiple relay stations are involved, there is communication between a first relay station and a second relay station and not concurrently between the user terminal and the first relay station and the user terminal and second relay station. Therefore, *Seligsohn* does not teach or suggest concurrent and separate and direct communications between a user terminal and multiple relay stations. Since *Seligsohn* is not addressing the issue of concurrent communications between a user terminal and multiple stratospheric transponder platforms, *Seligsohn* does not teach or suggest "maintaining the stratospheric transponder platforms in a substantially fixed position with respect to a user terminal antenna coupled to a user terminal so that the user terminal antenna does not have to track the stratospheric platforms; and communicating separate communications signals between the user terminal and at least two of the stratospheric transponder platforms concurrently" as presently recited in Claim 1.

The *Ames* reference also does not teach or suggest the user terminal communicating concurrently with multiple transponder platforms without the user terminal antenna having to track the platforms. *Ames* neither teaches nor suggests concurrent but separate communications that do not have to be combined by the receiver to produce a composite signal, but instead are independent of each other.

In view of the foregoing remarks and arguments, it is respectfully submitted that neither *Seligsohn* nor *Ames* singly or in combination teach or suggest Claims 1,6 and 20 and Claims 2, 3, 7,8 and 21 which are claims that depend from these claims.

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In view of the preceding remarks and changes, it is respectfully submitted that all of the claims presently pending in this application are allowable. Therefore, entry and consideration of this response, reconsideration of the rejections, and allowance are respectfully requested. If the Examiner feels that a telephone interview will advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney at the below-listed number.

Respectfully submitted,

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Cc: IDS, PTO Form 1449 and copies of references